

## CLAIMS

What is claimed is:

1. A method comprising:  
initializing a plurality of media devices in communication with a computing device;  
mapping information corresponding to each initialized media device to a plurality of memory locations of the computing device; and  
operating the initialized media devices based on the mapped information corresponding to each operated media device while the computing device is in a pre-OS environment.
2. The method of claim 1, wherein each media device is initialized at a different time period corresponding to each initialized media device.
3. The method of claim 1, wherein each information corresponding to each initialized media device is mapped to a different memory location in the plurality of memory locations of the computing device.
4. The method of claim 1, further comprising:  
initializing a first media device in the plurality of media devices by the computing device during a first time period;  
mapping a first information corresponding to the initialized first media device to a first memory location in the plurality of memory locations of the computing device;  
initializing a second media device in the plurality of media devices by the computing device during a second time period;  
mapping a second information corresponding to the initialized second media device to a second memory location in the plurality of memory locations of the computing device; and  
operating the initialized first and second media devices based on the mapped first and second information while the computing device is in the pre-OS environment.

5. The method of claim 4, wherein the initializing a first media device by the computing device comprises:
- enabling a decoding of a display interface on a path of the first media device;
  - enabling input/output decoding for the first media device;
  - enabling memory decoding for the first media device;
  - loading and dispatching a service instructions corresponding to the first media device;
  - obtaining a first memory information and a first mode corresponding to the first memory location; and
  - switching the first media device to the first mode.
6. The method of claim 5, wherein the initializing a second media device by the computing device comprises:
- disabling the enabled decoding of the display interface on the path of the first media device;
  - disabling the enabled input/output decoding for the first media device;
  - disabling the enabled memory decoding for the first media device;
  - enabling input/output decoding for the second media device;
  - enabling memory decoding for the second media device;
  - loading and dispatching a services instructions corresponding to the second media device;
  - obtaining a second memory information and a second mode corresponding to the second memory location; and
  - switching the second media device to the second mode.
7. The method of claim 4, wherein operating the first and second media devices based on the mapped first and second information comprises:
- re-enabling memory decoding for the first media device; and
  - interacting with the first and second media devices in the first and second modes.

8. The method of claim 1, further comprising:  
selecting a plurality of media devices in communication with the computing device for initializing; and  
allocating and programming communication resources for the selected plurality of media devices by the computing device prior to the initializing the plurality of media devices.
9. A system comprising:  
a plurality of media devices in communication with a computing device and adapted for initialization by the computing device; and  
a memory mapping logic adapted to map information corresponding to the initialized media devices to a plurality of memory locations in a system memory of the computing device,  
wherein the computing device is adapted to operate the initialized media devices based on the mapped information corresponding to each operated media device while the computing device is in a pre-OS environment.
10. The system of claim 9, further comprising:  
a display interface decoder subsystem adapted to decode a display interface on a path of each media device and to be enabled and disabled;  
an input/output decoder subsystem adapted to decode input/output for each media device, and to be enabled and disabled;  
a memory decoder subsystem adapted to decode memory instructions for each media device, and to be enabled and disabled;  
a memory controller adapted to load and dispatch service instructions stored in the system memory, and to obtain a memory information and a mode corresponding to each memory location corresponding to each media device;  
and  
a control logic adapted to switch the each media device to a mode corresponding to the switched media device.

11. The system of claim 10, wherein each of the service instructions corresponding to each media device comprises at least one of a video service instructions and an audio service instructions.
12. The system of claim 11, wherein the video service instructions comprises an option ROM instructions, and wherein the display interface comprises a video graphics array (VGA) interface.
13. The method of claim 9, wherein the memory mapping logic is further adapted to map each information corresponding to each initialized media device to a different memory location in the plurality of memory locations of the computing device.
14. The system of claim 9, wherein at least one of memory location in the plurality of memory locations comprises a linear frame buffer.
15. The system of claim 9, wherein the information corresponding to each initialized media device comprises at least one of data, instructions, and addresses.
16. The system of claim 9, wherein the computing device is adapted to detect the media devices; and to allocate and program communication resources for the detected media devices prior to the initialization of at least one of the media devices.
17. The system of claim 9, wherein at least one of the media devices comprises an on-board device and a plug-in device, wherein at least one of the on-board device and a plug-in device comprises at least one of a video device, an audio device and a audio/video device.
18. A storage medium that provides software that, if executed by a computing device, will cause the computing device to perform the following operations:  
initializing a plurality of media devices in communication with the computing device; and  
operating the plurality of initialized media devices while the computing device is in a pre-OS environment.

19. The storage medium of claim 18, wherein each media device is initialized at a different time period corresponding to each initialized media device.

20. The storage medium of claim 18 further comprising software adapted to map information corresponding to each of the plurality of initialized media devices to a plurality of memory locations of the computing device, each of the plurality of memory locations being different memory locations.